

Examiner Griffin:

This is in response to an outstanding Office Action in the above-identified application mailed September 30, 2002, with a shortened statutory period for response of three (3) months, set to 5 expire December 30, 2002.

Assistant Commissioner for Patents is authorized to withdraw any additional moneys required for this purpose from Deposit Account No. 01-0528.

IN THE CLAIMS

10 Kindly amend Claims 8, 15 and 19 to 21 inclusive, to read as follows:

8. The process according to claim 7 further comprising treating the immiscible aqueous phase separated from the reaction mixture to remove at least a portion of the sulfur-containing and/or nitrogen-containing organic compounds, recycling the treated aqueous phase to the reaction mixture, and blending at least a portion of the low-boiling blending component with the product containing less sulfur and/or less nitrogen than the high-boiling oxidation feedstock to obtain a component for refinery 15 blending of transportation fuel.

15. The process according to claim 12 wherein the treating of recovered organic liquid includes use of at least one immiscible liquid comprising a solvent having a dielectric constant in a range from about 24 to about 80 suitable to selectively extract oxidized sulfur-containing and/or nitrogen-containing organic compounds.

20 19. The process according to claim 7 further comprising treating the immiscible aqueous phase separated from the reaction mixture to remove at least a portion of the sulfur-containing and/or nitrogen-containing organic compounds, recycling the 25

treated aqueous phase to the reaction mixture, and blending at least a portion of the low-boiling fraction with the product containing less sulfur and less nitrogen than the oxidation feedstock to obtain components containing less than about 50 parts per million of sulfur for refinery blending of a transportation fuel.

20. The process according to claim 17 wherein the treating of recovered organic liquid includes use of at least one immiscible liquid comprising an aqueous solution of a soluble basic chemical compound selected from the group consisting of sodium, potassium, 10 barium, calcium and magnesium in the form of carbonate or bicarbonate.

21. A process for the production of refinery transportation fuel or blending components for refinery transportation fuel, which process comprises:

15 hydrotreating a petroleum distillate consisting essentially of material boiling between about 50° C. and about 425° C. by a process which includes reacting the petroleum distillate with a source of hydrogen at hydrogenation conditions in the presence of a hydrogenation catalyst to assist by hydrogenation removal of 20 sulfur and [/or] nitrogen from the hydrotreated petroleum distillate;

25 contacting the hydrotreated petroleum distillate with a soluble quaternary ammonium salt containing halogen, sulfate, or bisulfate anion, and an immiscible aqueous phase comprising a source of hydrogen peroxide, and at least one phospho-metallic acid, in a liquid reaction mixture under conditions suitable for reaction of one or more of the sulfur-containing and nitrogen-containing organic compounds;

30 separating from the reaction mixture both an essentially organic liquid and at least a portion of the immiscible aqueous phase; and